

STUDENT COURSEBOOK

Chapter 5: Water, Plumbing, and Waste

Water • Plumbing • Backflow • Mobile Water Tanks • Sewage • Refuse • Recycling

Training note: This coursebook summarizes Chapter 5 of the 2026 FDA Food Code for instruction. Jurisdictional adoption and requirements may vary.

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How to Use This Coursebook

Chapter 5 explains how safe water is supplied, protected, and distributed; how plumbing prevents contamination; and how sewage, liquid waste, refuse, recyclables, and returnables are safely managed.

Learning Objectives

- Identify approved drinking-water sources and water-quality requirements.
- Explain water capacity, pressure, and alternative water-supply requirements.
- Apply handwashing-sink installation, location, accessibility, and use requirements.
- Explain cross-connections, air gaps, backflow, and backflow-prevention devices.
- Describe mobile water-tank and mobile sewage holding-tank requirements.
- Explain sewage, liquid-waste, refuse, recycling, and returnable controls.

Chapter 5 at a Glance

Part	Topic
5-1	Water
5-2	Plumbing System
5-3	Mobile Water Tank and Mobile Food Establishment Water Tank
5-4	Sewage, Other Liquid Waste, and Rainwater
5-5	Refuse, Recyclables, and Returnables

1. Approved Water Sources and Water Quality



Chapter 5 visual: approved drinking water must be safe, sufficient, and protected from contamination.

Drinking water must be obtained from an approved public water system or a lawful nonpublic water system. Drinking-water systems must be flushed and disinfected after construction, repair, modification, or an emergency that may introduce contaminants.

- Public-system water must meet federal and state drinking-water standards.
- Nonpublic-system water must meet state drinking-water standards and generally be sampled at least annually and as state rules require.
- The most recent nonpublic-system sample report must be retained as required.
- Approved nondrinking water is limited to nonculinary uses such as air conditioning, nonfood-equipment cooling, and fire protection.

2. Water Quantity, Pressure, and Alternative Supply

The water source, hot-water generation, and distribution system must be sufficient to meet peak demands. Water under pressure must be provided to fixtures and equipment that require it, with limited exceptions for certain temporary supplies.

- Alternative supplies may include commercially bottled drinking water, closed portable containers, an enclosed vehicular tank, an on-premises storage tank, or piping/hoses connected to an adjacent approved source.
- Alternative water must still meet the applicable source, quality, and quantity requirements.

3. Handwashing Sink Installation and Use



Handwashing sinks: correct temperature, adequate flow, convenient location, accessibility, and handwashing-only use.

- A handwashing sink must provide water at least 85°F (29.4°C).
- A self-closing, slow-closing, or metering faucet must flow for at least 15 seconds without reactivation.
- At least one handwashing sink, and enough sinks for convenient employee use and as required by law, must be provided.
- Sinks must be convenient to food preparation, food dispensing, and warewashing areas and in or immediately adjacent to toilet rooms.
- A handwashing sink must always be accessible and may not be used for purposes other than handwashing.

4. Backflow Prevention and Cross-Connections



Backflow protection keeps contaminated liquids from entering the drinking-water supply.

- An air gap must be at least twice the diameter of the water-supply inlet and never less than 1 inch.
- Where required, an approved backflow-prevention device must be installed at the point of use, including applicable hose bibbs.
- A cross-connection may not connect drinking water to nondrinking water or water of unknown quality.
- Nondrinking-water piping must be durably identified.
- Backflow preventers and water-treatment devices must be inspected and serviced as required; the person in charge maintains service records.

5. Service Sinks and Plumbing Maintenance

- At least one service sink or curbed cleaning facility with a floor drain must be conveniently located for cleaning mops and disposing of mop water.
- Toilets and urinals may not be used to dispose of mop water or similar liquid waste.
- Plumbing systems must be repaired according to law and maintained in good repair.
- Produce-fogging reservoirs must be maintained and cleaned as required; the Food Code specifies at least weekly cleaning when its listed procedure is used.

6. Mobile Water Tanks and Hoses



Mobile water systems must protect potable water from contamination from filling through dispensing.

- Tank materials must be safe, durable, corrosion-resistant, nonabsorbent, smooth, and easily cleanable.
- Tanks must be enclosed and sloped to allow complete drainage.
- Drinking-water hoses must be safe, durable, smooth inside, and clearly identified when not permanently attached.
- Inlets, outlets, and hoses must be protected when not in use.
- Water tanks, pumps, and hoses must be flushed and sanitized after construction, repair, modification, and periods of nonuse.
- Components used for drinking water are generally dedicated to that purpose.

7. Sewage, Other Liquid Waste, and Rainwater



Wastewater must remain separated from food and drinking-water systems and go to an approved disposal system.

- A mobile food establishment sewage holding tank must be 15% larger than its water-supply tank.
- The holding tank must slope to a drain at least 1 inch in inner diameter and have a shut-off valve.
- Direct connections between sewage systems and drains from equipment holding food, portable equipment, or utensils are generally prohibited, subject to specified exceptions.
- Grease traps, when used, must be easily accessible for cleaning.
- Sewage must be conveyed and disposed through approved systems or facilities.
- Condensate, other nonsewage liquids, and rainwater must be drained according to law.

8. Refuse, Recyclables, and Returnables



Good waste management prevents contamination, odors, insect attraction, and rodent harborage.

- Outdoor waste-storage surfaces must be nonabsorbent, smooth, durable, and sloped to drain.
- Receptacles used with food residue must generally be durable, cleanable, insect- and rodent-resistant, leakproof, and nonabsorbent.
- Outside receptacles used with food residue must have tight-fitting lids, doors, or covers.
- Waste areas must be separated from food, equipment, utensils, linens, and single-service/single-use articles.
- Inside receptacles containing food residue must be covered when not in continuous use or after being filled; outside receptacles must be kept closed.
- Receptacles and waste areas must be cleaned as necessary and waste removed often enough to minimize odors and pest attraction.

Chapter 5 Quick Review

Key Number	What it means
85°F	Minimum handwashing-sink water temperature.
15 seconds	Minimum metered/self-closing faucet flow without reactivation.
1 inch	Minimum air gap; it must also be at least twice the inlet diameter.
At least annually	General nonpublic-water-system sampling frequency, plus state requirements.
15% larger	Mobile sewage holding tank compared with water-supply tank.
1 inch	Minimum inner diameter of mobile sewage holding-tank drain.

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End-of-Chapter Multiple-Choice Review

1. Drinking water must be obtained from:

- A. Any convenient source
- B. An approved source
- C. A rain barrel
- D. An open storage container

2. The minimum handwashing-sink water temperature is:

- A. 70°F
- B. 75°F
- C. 85°F
- D. 100°F

3. A metering faucet must flow for at least:

- A. 5 seconds
- B. 10 seconds
- C. 15 seconds
- D. 30 seconds

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4. The minimum air gap is:

- A. 1/4 inch
- B. 1/2 inch
- C. 3/4 inch
- D. 1 inch

5. Which is an allowed use of approved nondrinking water?

- A. Washing produce
- B. Making ice
- C. Fire protection
- D. Handwashing

6. A handwashing sink may be used for:

- A. Handwashing only
- B. Dumping beverages
- C. Thawing food
- D. Storing utensils

7. Mop water should be disposed of in:

- A. A food-prep sink
- B. A toilet
- C. A service sink or curbed cleaning facility
- D. A hand sink

8. A mobile sewage holding tank must be:

- A. 15% larger than the water-supply tank
- B. The same size
- C. 15% smaller
- D. Any size

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9. Outside waste units used with food residue need:

- A. Open tops
- B. Tight-fitting lids, doors, or covers
- C. Paper liners only
- D. No cleaning

10. A cross-connection can threaten:

- A. The drinking-water supply
- B. Only dry storage
- C. Only the dumpster
- D. Only the parking lot

Answer Key

1. B 2. C 3. C 4. D 5. C 6. A 7. C 8. A 9. B 10. A

Source and Training Use

This coursebook is an instructional summary of Chapter 5 of the 2026 FDA Food Code. It does not replace the complete Food Code or requirements adopted by the applicable regulatory authority.

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